

COMPREHENSIVE EMERGENCY MANAGEMENT

UNIT I



Introduction

Your job as an emergency program manager is of vital importance to your community. If you do your job well, you can help prevent death and injury to the citizens of your community, you may be able to save millions of dollars in repair costs, and you can feel confident that your community is prepared not only for a nuclear attack but also for technological and natural disasters.

It is important for you to realize right from the start two important facts about your job.

First, the emergency *program* manager differs from an emergency *response* manager.

Second, part of that difference is that you are responsible for building your jurisdiction's part of a national emergency management system capable of responding not only to local or regional emergencies, but also to national security emergencies.

As emergency *program* manager, you are responsible for coordinating the plans and operations of the various components of the emergency management system—fire and police, emergency medical services, public works, volunteers, and other groups contributing to the management of emergencies. The emergency *response* manager manages the application of resources during a disaster. A Fire Chief, a Public Works Director, and a Medical Services Coordinator are examples of emergency response managers. You will

be working closely with the emergency response managers as you prepare your community for emergencies. While the emergency program manager works more closely than ever with other emergency responders in fire, police, emergency medical, and public works, there is a danger of ignoring your role in building a national emergency management system capable of responding to national security emergencies. As the emergency program manager, you must recognize that natural disasters and technological emergencies may seem most pressing. Yet, the tools at hand and, perhaps, the funding that supports your efforts are a part of America's commitment to an effective civil defense.

Just as you will work closely with other agencies in your jurisdiction to build effective emergency management, you will work closely with other levels of government to build effective *national* emergency management. This is the essence of the partnership that is described in the Civil Defense Act of 1950, as amended. This act is the basis for your job as emergency program manager.

The Act states:

It is the policy and intent of Congress to provide a system of civil defense for the protection of life and property in the United States from attack and from natural disasters.



Figure 1-1: No two emergency program managers' jobs are exactly the same.

The “system of civil defense” that the Act describes means *you*. It means you, your plans, your community resources—your local or state emergency management system. That is how the national civil defense and emergency management system is constructed—on your jurisdiction’s efforts.

A large city may have a full-time emergency program manager, with a paid supporting staff. There also maybe a full-time fire and police department. A small community may only have a volunteer fire department with only two or three pieces of apparatus. The emergency program manager may also be a volunteer. You may be in one of these two categories or someplace in between. Perhaps you are a shared employee, spending a percentage of time as the emergency program manager and another part of your time as a member of some other

governmental agency, such as fire, public safety, planning, or public works.

Whatever your situation, this course is for you.

This course is designed to cover the basics of emergency management and your role in building the national civil defense system. The principles you will learn apply equally well to the volunteer as to the full-time paid emergency program manager. Therefore, as you study this course, think about adapting the information to your particular job.

The format of this course is designed to help you learn and apply the principles and tasks involved in emergency management. This unit defines emergency management. The following unit describes the tasks included in the job of emergency program manager. The remaining units of the course detail

specific parts of the emergency program manager's job in the four phases of emergency management.

When you complete this course you will be ready to "start" your job as an emergency program manager. The knowledge you gain in this course will be applied, adapted, and refined by further experience and training. As you study this course, remember that your efforts in emergency management can make the citizens of your community better prepared for a disaster.

In most units you will find **THINGS TO DO**. This part of the course provides worksheets, exercises, and tasks for the future. Complete the worksheets and the exercises. For the more time consuming tasks in **THINGS TO DO** you should think about them and save them for the future. Make a note right on the page of any ideas you might have on how you would accomplish the task. Remember, **THINGS TO DO** are part of your course. You will have a much better

understanding of your job as an emergency program manager as it applies to your community by completing the **THINGS TO DO**.

At the end of most sections in a study unit there are **SELF TEST QUESTIONS**. These are to help you test yourself so you can see how well you have mastered the material. If you can't answer a question, don't guess. Find where the subject is covered and look for the answer. Looking in the unit to find the answer to a question is not cheating. It is learning. If you do not know the answer to a **SELF TEST QUESTION**, do not go on. Review the material until you find the answer. The answers to all of the **SELF TEST QUESTIONS** are provided at the end of each unit.

We wish you every success with this course and your emergency management career. Above all, we hope you achieve a personal feeling of satisfaction from completing this course and doing a good job.

What Is Emergency Management?

While the functions of emergency management have been performed for decades by government and private organizations (Ben Franklin formed the first fire department more than 200 years ago, for example), it was only recently that the broader ideas about managing emergencies discussed in this course were developed.

In this course, the concept used for handling disasters and their consequences is called Comprehensive Emergency Management (CEM). This approach was institutionalized in 1979 with the creation of the Federal Emergency Management Agency (FEMA). FEMA resulted from the consolidation of five federal agencies that were dealing with many types of emergencies. Since that time, many state and local organizations have accepted this approach and changed the names of their organizations to include the words “emergency management.”

The name change was an indication of a change in orientation away from specialized preparedness for single hazards or narrowly defined categories of hazards and toward an *all-hazards* approach—attack, natural, and technological—to potential threats to life and property. As Congress and the Federal Emergency Management Agency have been quick to point out, this change reflects not a *reduction* in security, but an increased emphasis on making the nation's emergency management capability responsive to any major emergency.

This expansion into new hazards was not the only change brought about by the development of the concept of **Comprehensive Emergency Management**, for the concept consists of three interrelated components:

(1) All types of hazards: The commonalities among all types of technological and natural disasters suggest strongly that many of the same management strategies can apply to all such emergencies;

(2) An emergency management partnership: The burden of disaster management, and the resources for it, require a close working partnership among all levels of government (Federal, regional, state, county, and local) and the private sector (business and industry, voluntary organizations, and the general public); and

(3) An emergency lifecycle: Disasters do not just appear one day. Rather, they exist throughout time and have a lifecycle of occurrence which must be matched by a series of management phases that include strategies to mitigate hazards, prepare for and respond to emergencies, and recover from their effects.

These three components form Comprehensive Emergency Management, which is a good place to begin defining what this course is all about.

EMERGENCY is defined as any event which threatens to, or actually does, inflict damage to property or people.

Large disasters can range from hurricanes and floods, to explosions and toxic chemical releases.

MANAGEMENT is defined as the coordination of an organized effort to attain specific goals or objectives. In emergency management, *MANAGEMENT means an organized effort to mitigate against, prepare for, respond to, and recover from an emergency.*

COMPREHENSIVE is the word that brings all this together. It clarifies "emergency" by including all forms of natural, and technological events which threaten or adversely affect lives and property. Comprehensive gives more definition to the word management. Management means bringing together the proper mix of resources from the federal, state, and local governments, from business and industry, and from the public.

Finally, comprehensive adds a new factor to the meaning of emergency management—*PHASES*. *Phases come from the idea that disasters have a lifecycle.* Disaster don't just suddenly appear. A hazard exists, but it takes some event or accident to turn it into a disaster. For example, a river always flows through a town and propane gas trucks pass through the streets. Large amounts of rain, or a breaking dam can produce a flood. Equipment failure or human error, similarly, can turn a routine gas delivery into a disaster. As a result, one of the basic principles of CEM is that we can do something useful both *before and after* a hazard occurs. Comprehensive Emergency Management suggests that there are

four phases of emergency management which must work together to protect a community.

Phases of Emergency Management

Ever since the Second World War, emergency management has focused primarily on preparedness. But being prepared is only one phase of Comprehensive Emergency Management. A community also has the opportunity to deal with emergencies before they strike and the responsibility to aid recovery after a disaster. As a result, current thinking defines four phases of Comprehensive Emergency Management. They are MITIGATION, PREPAREDNESS, RESPONSE, and RECOVERY. There is an entire course unit on each of these phases. Examine the figure below and then let's look at a brief definition of each so that you can visualize the broad scope of emergency management.

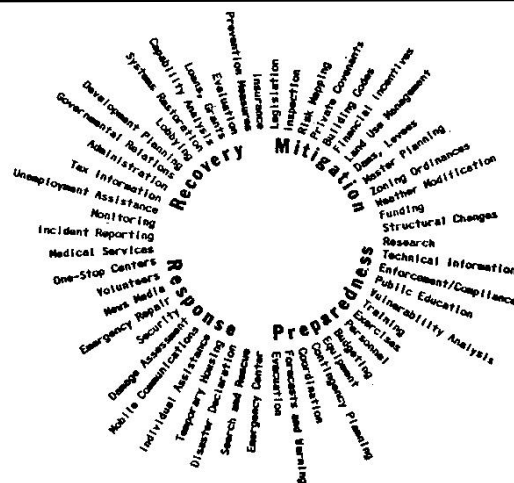


Figure 1-2: Actions taken in four phases of emergency management (Reprinted by permission of Hazard Monthly and Research Alternatives, Inc.)

The four phases of comprehensive emergency management are visualized as having a circular relationship to each other. Each phase results from the previous one and establishes the requirements of the next one. Activities in one phase may overlap those in the previous section.

The phases were illustrated in Figure 1-2 as parts of a circle, each merging into the next one. Preparedness moves swiftly into response when disaster strikes. Response yields to recovery at different times depending on the extent and kind of damage. Similarly, recovery should trigger mitigation, motivating attempts to prevent or reduce the potential of a next disaster. Finally, the disaster phases know no beginning or end. The recognition of a threat can motivate mitigation as well as an actual emergency can.

In the units that follow, we shall use the four phases of emergency management as a way of structuring the lessons. Each phase will be treated in turn, beginning with the phase called MITIGATION.

MITIGATION refers to activities which actually eliminate or reduce the chance of occurrence or the effects of a disaster. Recent research has shown that much can be done to either prevent major emergencies or disasters from ever happening, or if nothing else, at least reduce the damaging impact if they cannot be prevented. For example, requiring protective construction to reinforce a roof will reduce damage from the high winds of a hurricane. Preventing the use of hazardous areas like floodplains or adjusting the use of

such areas by elevating structures can reduce the chance of flooded Figure 1-3: Preventing the use of hazardous areas.

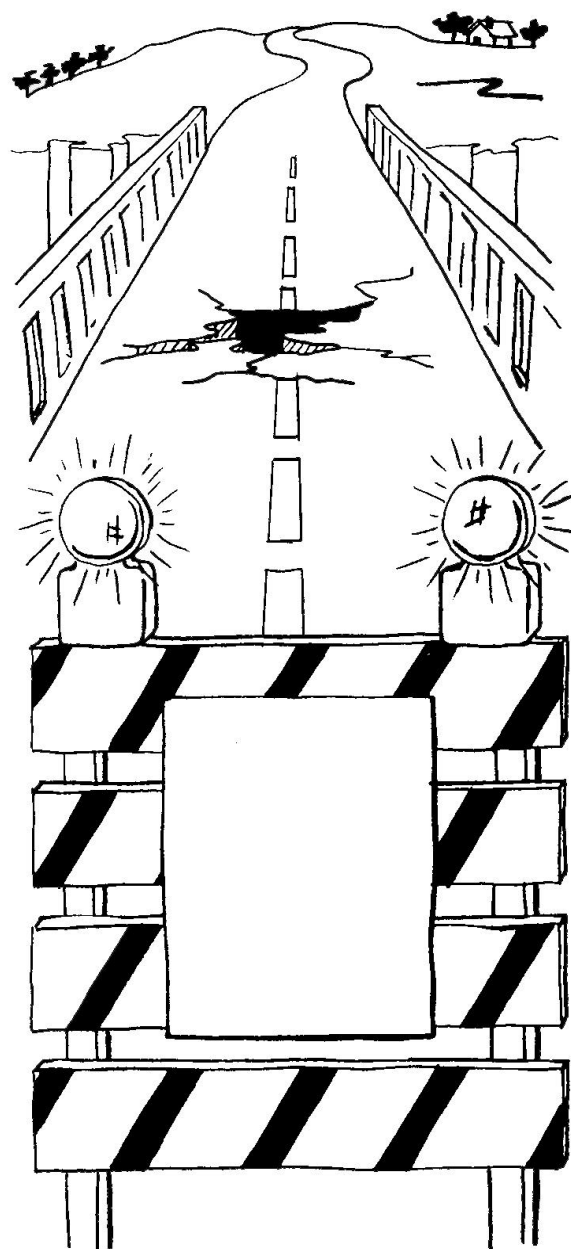


Figure 1-3: Preventing the use of hazardous areas is MITIGATION.

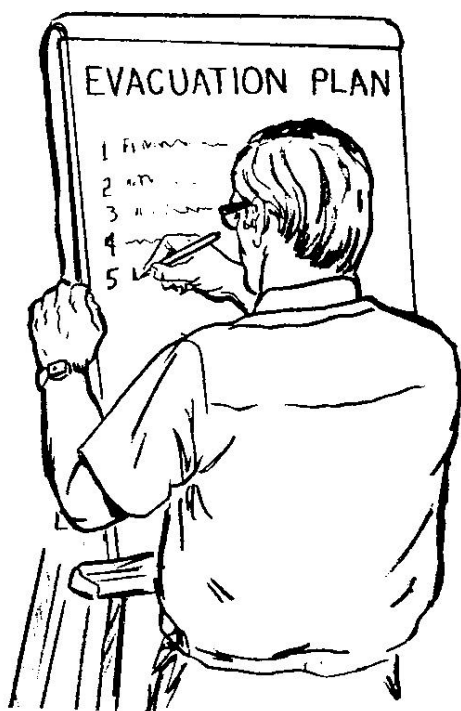


Figure 1-4: PREPAREDNESS is being ready for the emergency you cannot avoid or prevent.

The next phase of emergency management is PREPAREDNESS. *PREPAREDNESS is planning how to respond in case an emergency or disaster occurs and working to increase resources available to respond effectively.* Preparedness activities are designed to help save lives and minimize damage by preparing people to respond appropriately when an emergency is imminent. To respond properly, a jurisdiction must have a plan for response, trained personnel to respond, and necessary resources with which to respond. In the preparedness unit, you will learn how to develop a preparedness plan for your community and develop the necessary human and equipment resources.

RESPONSE is the next phase of emergency management. *RESPONSE activities occur during and immediately following a disaster. They are designed to provide emergency assistance to victims of the event and reduce the likelihood of secondary damage.* Your local fire department, police department, rescue squad and emergency medical services are primary responders. In the unit on response you will learn about the relationship of emergency program management to these emergency responders in your community.



Figure 1-5: Dedicated emergency responders are the key to effective emergency response.

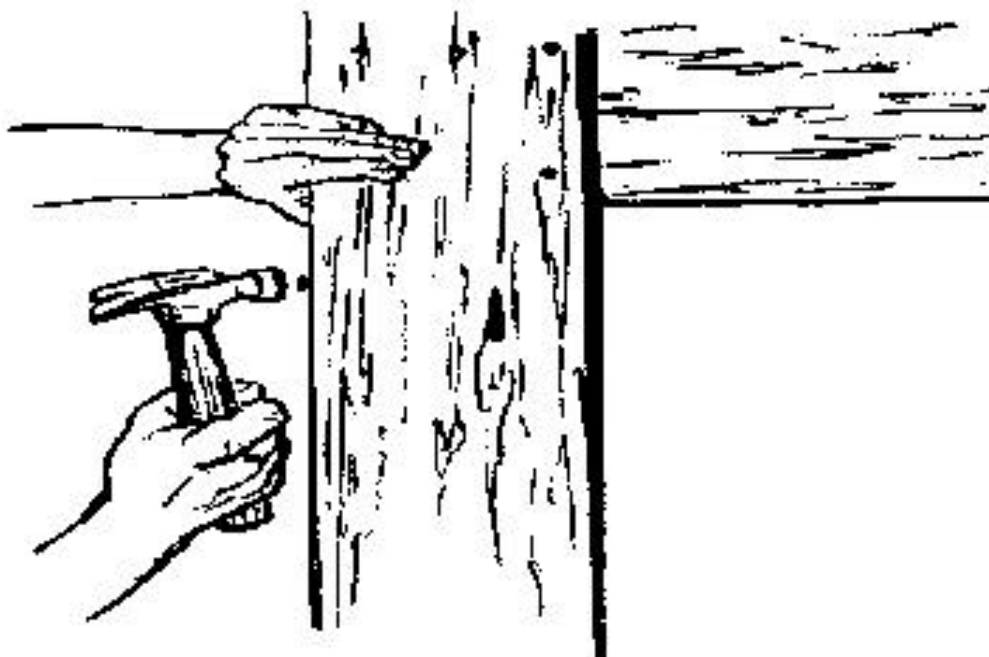


Figure 1-6: The RECOVERY period puts the community back together again.

RECOVERY is the final phase of the emergency management cycle. Recovery continues until all systems return to normal, or near normal. Short-term recovery returns vital life support systems to minimum operating standards. Long-term recovery from a disaster may go on for years until the entire disaster area is completely redeveloped, either as it was in the past or for entirely new purposes that are less disaster-prone. For example, portions of a flood-prone town can be relocated and the area turned into open space or parkland. This illustrates that during recovery, opportunities to mitigate future disasters arise. Recovery planning should include a review of ways to avoid future emergencies.

Implementing Emergency Management

The concept of an all-hazards approach to emergency management defined in Comprehensive Emergency Management

has been implemented by the Federal Emergency Management Agency in its Integrated Emergency Management System. This implementation is based on all the principles of CEM with the specific goals of:

- Fostering a full federal, state and local government partnership with provisions for flexibility at the several levels of government for achieving common national goals.
- Emphasizing implementation of emergency management measures which are known to be effective.
- Achieving more complete integration of emergency management planning into mainstream state and local policy-making and operational systems.
- Building on the foundation of existing emergency management plans, systems, and capabilities to broaden their applicability to the full spectrum of emergencies.

THE EMERGENCY PROGRAM MANAGER

FOUR PHASES OF COMPREHENSIVE EMERGENCY MANAGEMENT

1	MITIGATION (LONG-TERM) DEFINITION: Any activities which actually eliminate or reduce the occurrence of a disaster. It also includes long-term activities which reduce the effects of unavoidable disasters.	PREPAREDNESS (TO RESPOND) DEFINITION: Preparedness activities are necessary to the extent that mitigation measures have not, or cannot, prevent disasters. In the preparedness phase, governments, organizations, and individuals develop plans to save lives and minimize disaster damage. Preparedness measures also seek to enhance disaster response operations	RESPONSE (TO EMERGENCY) DEFINITION: Response activities follow an emergency of disaster. Generally, they are designed to provide emergency assistance for casualties. They also seek to reduce the probability of secondary damage and to speed recovery operations	RECOVERY (SHORT AND LONG TERM) DEFINITION: Recovery continues until all systems return to normal or better. Short-term recovery returns vital life support systems to minimum operating standards. Long-term recovery may continue for a number of years after a disaster. Their purpose is to return life to normal, or improved levels.
2	GENERAL MANAGER: Building codes Vulnerability analyses updates Tax incentives/disincentives Zoning and land use management Building use regulation/safety codes Compliance and enforcement Resource allocations/interstate sharing Public education	Preparedness plans Emergency exercise/training Warning systems Emergency communications systems Evacuation plans and training Resource inventories Emergency personnel/contact lists Mutual aid agreements Public information/education	Activate public warning Notify public authorities Mobilize emergency personnel/equipment Emergency medical assistance Man emergency centers Declare Disaster/evacuate Mobilize security forces Search and rescue Emergency suspension of laws	Damage insurance/loans and grants Temporary housing Long-term medical care Disaster unemployment insurance Public information Health and safety education Reconstruction Counseling programs Economic impact studies
3	HAZARD SPECIFIC MEASURES FLOOD: Dam construction/inspection Stream channelization construct/protect retention barriers Reforest/prevent deforestation Contour farming flood proof buildings	Temporary levee construction Stream flow monitoring Ice and debris removal Temporary flood proofing	Helicopter search Boat rescue	Decontamination of water sources Replant crops Pump out flooded basements Remove temporary floodproofing Monitor disease
	EPIDEMIC: School inoculations Rodent/insect eradication Water purification Sanitary waste disposal Health codes/laws/inspections Public health education	Stockpiling drugs Physician preparedness plans Public notification Quarantine regulations and plans Emergency medical authorities	Quarantine Disinfect property Secure bodies Isolate carriers	Continuing research into causes Long-term restorative therapy
	FIRE: Fire codes No-smoking laws Fire zoning Fire safety information	Fire drills/exit signs Callboxes/smoke detectors Police crowd control training Fire department and agreements Firefighter training Automatic	Firefighting Containment	Rebuilding Razing burned-out buildings Reforestation
	HAZARDOUS MATERIALS SPILL: Transport speed limits Container structure codes Corporate licensing Restricted routing Materials identification codes	Containment and scrubbing equipment Stockpile neutralizing materials Emergency training for transporters Specials apparatus for emergencies	Identify material Notify Nation Response Center/CHEMTREC Containment Plume tracking Air/Water/soil contamination controls	Reassess existing regulations Decontamination environment
	LANDSLIDE: Forest management Preserve ground cover Maintain natural runoff Stabilize slopes Real Estate disclosure laws	Reinforce threatened structures Landshift monitors	Assess stability of new formation Reinforce against secondary state	Reside denuded areas New land-use planning
	WIND: Roof anchors Window size and thickness codes Windbreaks	Storm shelter construction Property protection measures Storm watch and warning guides	Reinforce damaged property Broadcast State	Reconstruction
	HURRICANE STORM SURGE: Barrier islands Coastal wetlands protection Replace coastal sand dunes Construct breakwaters/levees Coastal zone management Public information program	Vertical evacuation plans Storm tracking Shutter windows Evacuate planes and boats	Same as for flood/wind (above)	Rebuild destroyed sand dunes
	GASOLINE SHORTAGE: Alternative research Allocation/international sharing Mass transit systems/car pooling Design emergency efficient engines Reduce speed limits Energy conservation program	Stockpile reserves Reallocate to shortage areas Rationing plans	Odd-even purchase program Minimum purchase requirements Increase refinery production Deregulate oil Increase gasoline prices	Excess profits tax on companies Reassess allocation plans Two-way/Truck hauling
	NUCLEAR PLANT ACCIDENT: Site zoning Waste management/containment research Plant safety codes/inspections Plant operator training Environmental impact research/statements	Contamination monitoring Identify vulnerable populations Shelter preparation Designate Governor's technician Emergency procedures rehearsal	Contains radioactivity	Reassess sitting requirements Monitor deterioration of contaminate

Figure 1-7: Four phases of Comprehensive Emergency Management.

To accomplish these ends requires a national program built upon local jurisdiction efforts. This course helps you begin to acquire the skills and knowledge essential to building a community emergency management program fully integrated into a national emergency management system.

This course and IEMS takes into account the fact that each community across the country has its own existing level of emergency management capabilities. Some jurisdictions have already put in place the components of an effective emergency management system. IEMS will build upon these existing capabilities, providing incentives to improve and further integrate localities and states into a national system.

In the IEMS approach, the community which has, to this point, done little toward developing emergency management activities will begin a process to develop emergency plans that are governed by national criteria specific enough to provide guidance but sufficiently general to allow flexibility for the local protection options communities believe are critical.

The process begins with a comprehensive hazard assessment prepared by the community, possibly in conjunction with state and federal regional personnel, depending on the circumstances. It then proceeds through an analysis of capability (identifying shortfalls of resources), and moves to the development of a generic operations plan with annexes for the emergency management functions and appendices for the unique aspects of individual emergencies, the maintenance of capability, mitigation activities,

emergency operations, and evaluation of such operations. The jurisdiction will then be asked to prepare a multi-year development plan, followed by annual plan increments as the process proceeds. By following this process, a community can establish an Integrated Emergency Management System with readiness to deal with both the common elements of preparedness and those requirements which are unique to individual emergencies.

In jurisdictions which have already developed their planning process more fully, a number of the steps in this process may only need review or update.

In FEMA's commitment to IEMS rests the commitment to capitalize upon the substantial body of experience in emergency management as well as the vast amount of in-place resources in communities throughout our nation. This course is the first step you, personally, will take toward participating in the national emergency management system. That participation begins, most importantly, in your own jurisdiction as you move toward integrated emergency management. As you proceed with your daily activities, ask yourself how your work relates to public safety from all hazards. Ask yourself how emergency planning can be integrated in overall community planning. And ask yourself how the full partnership of governments and the private sector can be implemented for emergency management. The community that constantly considers ways to improve emergency management through integration with other resources, skills, and knowledge will make significant progress toward improved public safety.

IEMS and You

The Integrated Emergency Management System provides the broad outlines and some specific tasks of your job.

First, you are responsible for all types of natural and manmade disasters.

Second, your job is to advise and help implement the planning and coordination of, mitigation of, preparedness for, response to, and recovery from all disasters.

Third, you do not act alone in accomplishing emergency management in your jurisdiction. IEMS is a partnership of other members of your jurisdiction's staff, the federal, state, and local governments, private business and industry, and the public. Your job, then, includes building and maintaining a partnership that will help fulfill the Integrated Emergency Management System.

The job of the emergency program manager involves all types of disasters, all phases of management, and all necessary participants. In the following chapters you will learn more about the details of the job of emergency program manager and the vital role you play in protecting the lives and property of your community.

How Well Have You Learned?

SELF TEST REVIEW

Answer the following questions to test your knowledge of Unit 1 facts. Read each question carefully, then write in the answer that you think is correct. Answers can be found on page 1-14.

1.) What are the three components of comprehensive emergency management?

2.) What are the two types of disaster each emergency program manager has to consider?

3.) Define "emergency."

4.) What are four of the phases of comprehensive emergency management?

5.) What national program is designed to use local emergency capabilities to build a national emergency management system?

CORRECT ANSWERS TO SELF TEST REVIEW Review Pages

- 1.) Three types of disasters 1-5
Four levels of participation
Four phases of management in a hazard lifecycle
- 2.) Natural and technological emergencies 1-5
- 3.) Any event that threatens or inflicts damage to property or people 1-5
- 4.) Mitigation, preparedness, response, recovery 1-6 thru 1-9
- 5.) The Integrated Emergency Management System 1-9 thru 1-12

For every question that you answered incorrectly, review the pages listed above next to the answer to find out why your answer was incorrect.